March 6, 2002
1420 East 6th Ave.
P.O. Box 200701
Helena, MT 59620-0701

Environmental Quality Council
Montana Department of Environmental Quality
Montana Department of Fish, Wildlife and Parks
Fisheries Division
Endangered Species Coordinator
Native Species Coordinator, Fisheries Office
Missoula Office
Montana State Library, Helena
MT Environmental Information Center
Montana Audubon Council
Missoula County Conservation District, 5115 Highway 93 South, Missoula, MT 59801
U.S. Army Corp of Engineers, Helena
U.S. Fish and Wildlife Service, Helena
State Historic Preservation Office, Helena
Mountain Water Company, 1345 West Broadway, Missoula, MT 59802
Montana Trout Unlimited, P.O. Box 7186, Missoula, MT 59807
Westslope Chapter Trout Unlimited, P.O. Box 7165, Missoula, MT 59807

Ladies and Gentlemen:

Please find enclosed an Environmental Assessment prepared for a Future Fisheries Project tentatively planned to construct a fish ladder around Mountain Water Company Dam on Rattlesnake Creek. The intent of the project is to provide fish passage for migratory salmonids, specifically westslope cutthroat trout and bull trout. This proposed project is located on property owned by Mountain Water Company near the city of Missoula in Missoula County.

Please submit any comments that you have by 5:00 P.M., April 6, 2002 to the Department of Fish, Wildlife and Parks in Helena at the address listed above. Completion of this project is contingent upon approval being granted by the Fish, Wildlife and Parks Commission. If you have any questions, feel free to contact me at (406) 444-2432. Please note that this draft EA will be considered as final if no substantive comments are received by the deadline listed above.

Sincerely,

Mark Lere, Program Officer
Habitat Protection Bureau
Fisheries Division
Email: mlere@state.mt.us

ENVIRONMENTAL ASSESSMENT

Fisheries Division
Montana Fish, Wildlife and Parks
Rattlesnake Creek Fish Passage Project

General Purpose: The 1995 Montana Legislature enacted statute 87-1-272 through 273 which directs the Department to administer a Future Fisheries Improvement Program. The program involves physical projects to restore degraded fish habitat in rivers and lakes for the purpose of improving wild fisheries. The legislature established an earmarked funding account to help accomplish this goal. Additionally, the 1999 Montana Legislature amended statute sections 87-1-273, 15-38-202 and Section 5, Chapter 463, Laws of 1995 to create a bull trout and cutthroat trout enhancement program. The program calls for the enhancement of bull trout and cutthroat trout through habitat restoration, natural reproduction and reductions in species competition by way of the Future Fisheries Program. This project is being proposed to construct a fish passage structure at the Mountain Water Company Dam on Rattlesnake Creek, a tributary to the Clark Fork River. The intent of this project is to provide for upstream passage of migratory salmonids, specifically westslope cutthroat trout and bull trout, opening nearly 15 miles of additional spawning and rearing habitat in the Rattlesnake Creek drainage. The project site is located on property owned by the Mountain Water Company approximately 3 miles upstream of the mouth of Rattlesnake Creek near the city of Missoula in Missoula County (Attachment 1).

I. Location of Project: This project will be conducted on Rattlesnake Creek located approximately 3 miles north of the town of Missoula within Township 13 North, Range 19 West, Section 2 in Missoula County.

II. Need for the Project: One goal within Montana Fish, Wildlife and Parks six year operations plan for the fisheries program is to "restore and enhance degraded habitats" by implementing habitat restoration projects and administering the Future Fisheries Improvement Program to restore important habitats on public and private lands. This proposed project would help meet this goal.

The Mountain Water Company Dam on Rattlesnake Creek, formerly owned by Montana Power Company, was constructed in 1905. Currently, the dam serves as a back-up water supply for the city of Missoula. The crest of the dam is approximately 10 feet high and likely has impeded upstream fish passage since the dam was completed in 1905. Rattlesnake Creek is one of three major sources of recruitment for tout into the Clark Fork River for nearly a 100-mile reach of river located between Missoula and St. Regis. Recent research has documented large numbers of adult trout, particularly westslope cutthroat trout, congregating at the base of the dam. The study revealed that at least some of these cutthroat trout came from the Clark Fork River. Further research found that the abundance of bull trout redds upstream of the dam could be enhanced by transporting adult fish over the structure. All of these observations suggest that unimpeded upstream fish passage at this dam would be beneficial for native fish populations.

III. Scope of the Project:

The project proposes to locate an adult fish passage structure on the left abutment between the dam's left retaining wall and the caretaker's house (Attachments 2 and 3). The ladder would be

operated with a flow of 2 to 5 cubic feet per second. Flow from the sediment basin would be passed through a 36-inch CMP culvert with light wells for approximately 120 feet to a three-bay stoplog-control ladder. The concrete ladder would create a backwater in the culvert at all times to avoid excessive barrel velocities. Below the control ladder, a pool weir ladder would be installed using a series of 10 hydraulic drops created by a series of steel weir blades. The 50-foot long earthen channel for the pool weir ladder would be lined with a geomembrane liner to reduce infiltration and maintain desired pool depths. Six to 12 inch cobble would be placed on top of the liner. A rock barb would be constructed in Rattlesnake Creek near the ladder bottom to maintain scour at the entry pool. All areas disturbed by construction would be re-vegetated with a native mix of grass seed. The project is to be conducted in three phases. Phase 1 would involve the enhancement of the collection pool at the entrance to the proposed fish ladder. Phase 2 would involve testing the location of the proposed ladder using a temporary siphon system, a denil fish ladder and a trap. If Phase 2 proves successful, the step-pool bypass channel would be installed (Phase 3). This project is expected to cost $134,800.00. Of this total, the Future Fisheries Improvement Program would be contributing up to $67,800.00.

IV. Environmental Impact Checklist:

Please see attached checklist.

V. Explanation of Impacts to the Physical Environment

1. Terrestrial and aquatic life and habitats.

Creation of fish passage at the Mountain Water Company Dam would open nearly 15 miles of spawning and rearing habitat to migratory salmonids, specifically westslope cutthroat trout and bull trout, from the Clark Fork River. This would represent a significant increase in the spawning and rearing habitat currently available in the Clark Fork River drainage. This additional habitat is expected to significantly increase the recruitment of salmonids to Rattlesnake Creek and the Clark Fork River.

2. Water quantity, quality and distribution.

Short-term increases in turbidity will occur during project construction. Construction will be done during low flow when all of the stream flow will be passed through the dam. To minimize turbidity, operation of equipment in the stream channel will be minimized to the extent practicable. An earthen coffer dam will be constructed on the downstream side of the dam to isolate installation of the ladder's entrance features on the left abutment. Installation of the ladder, culvert and auxiliary system will be completed in the dry. The Department of Environmental Quality will be contacted to determine narrative conditions required to meet short-term water quality standards and protect aquatic biota. A 310 permit (Natural Streambed and Land Preservation Act) will be obtained from the local conservation district and the U.S. Army Corp of Engineers will be contacted for requirements to meet the federal Clean Water Act (404 permit).

3. Geology and soil quality, stability and moisture.

Soils along the left abutment of the dam would be disturbed during the construction of the ladder system, but would quickly stabilize following proposed re-vegetation efforts.

4. Vegetation cover, quantity and quality.

Vegetation and cover would be disturbed during the period of construction and a few trees would need to be removed. However, proposed re-vegetation efforts would act to mitigate these disturbances.

5. Aesthetics.

Aesthetics would be adversely impacted during construction due to ground disturbance and the presence of heavy equipment. In the long term, aesthetics would not be adversely affected.

7. Unique, endangered, fragile, or limited environmental resources.

The Mountain Water Company Dam has completely impeded fish migration in the upper 15 miles of Rattlesnake Creek since it was constructed in 1905. Recent research has found significant numbers of fluvial westslope cutthroat trout and bull trout congregating at the base of this dam. This project is intended to re-connect nearly 15 miles of spawning and rearing habitat in Rattlesnake Creek with the Clark Fork River, primarily for migratory westslope cutthroat trout and bull trout. The westslope cutthroat trout and bull trout are species of special concern in Montana. The potential for genetic contamination of the resident cutthroat population is not an issue for this proposed project because past management has introduced rainbow trout and Yellowstone cutthroat trout into the upper drainage. Because Rattlesnake Creek supports bull trout, a species listed as threatened under the Endangered Species Act, the project will be included in Montana Fish, Wildlife and Parks Section 6 conservation plan with the U.S. Fish and Wildlife Service.

9. Historic and archaeological sites

The proposed project may require an individual Army Corp of Engineers 404 permit. Therefore, the State Historic Preservation Office has been contacted to determine the need for compliance with the federal historic preservation regulations. The project will not begin until a cultural clearance is granted.

VI. Explanation of Impacts on the Human Environment.

7. Access to & quality of recreational activities.

This fish passage project is expected to significantly increase the recruitment of salmonids to Rattlesnake Creek and the Clark Fork River and is expected to improve the recreational fishery that they provide.

VII. Discussion and Evaluation of Reasonable Alternatives.

1. No Action Alternative

If no action is taken, the Mountain Water Company Dam will continue to be a barrier to fluvial salmonids. As a result, the potential for recruitment of salmonids from the Rattlesnake Creek drainage, especially westslope cutthroat trout and bull trout, will not be realized.

2. Install a denil fish ladder for fish passage

Denil ladders are not a favored choice for permanent installations on higher head dams because of maintenance problems and the difficulty of providing sufficient operating head when the stream flow is low.

3. Install a vertical slot ladder for fish passage

Installation of a vertical slot ladder is not favored because of construction concerns that would require a greater amount of time to complete the project.

4. Construct a rock engineered steepened channel

Construction of a rock engineered steepened channel is not favored because of the overall complexity of construction and greater maintenance needs this type of project would require.

5. The Proposed Alternative

The proposed alternative is designed to provide migratory fish passage around a dam on Rattlesnake Creek that has impeded fish movement since it was constructed in 1905. Creating fish passage at this dam would re-connect nearly 15 miles of spawning and rearing habitat in Rattlesnake Creek to the Clark Fork River. This proposal is expected to significantly improve recruitment of salmonids to Rattlesnake Creek and the Clark Fork River and enhance the recreational fishery that they provide. A step-pool steel weir ladder is preferred because work in the stream would be minimized, time for construction would be the lessened, maintenance would be minimized and fish would have good access to the ladder.

VIII. Environmental Assessment Conclusion Section

1. Is an EIS required? No.

We conclude from this review that the proposed activities will have a positive

impact on the physical and human environment.

2. Level of public involvement.

   The proposed project was reviewed and supported by the public review panel of the Future Fisheries Improvement Program. The proposed project also will be reviewed by the Fish, Wildlife and Parks Commission and will be contingent upon their approval. The Environmental Assessment (EA) is being distributed to all individuals and groups listed on the cover letter. The EA will be published on Montana Fish, Wildlife and Parks webpage: fwp.state.mt.us

3. Duration of comment period?

   Public comment will be accepted through 5:00 PM on April 6, 2002.

4. Person responsible for preparing the EA.

   Mark Lere, Program Officer
   Habitat Protection Bureau
   Fisheries Division
   Montana Department of Fish, Wildlife and Parks
   1420 East 6th Avenue
   Helena, MT 59620

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MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS
1420 E 6th Ave, PO BOX 200701, Helena, MT 59620-0701
(406) 444-2535

ENVIRONMENTAL ASSESSMENT

Project Title Rattlesnake Creek Fish Passage Project

Division/Bureau Fisheries Division -Future Fisheries Improvement
Description of Project The project is being proposed to construct a fish passage structure at the Mountain Water Company Dam on Rattlesnake Creek, a tributary to the Clark Fork River. The project site is located on property owned by Mountain Water Company approximately 3 miles upstream from the mouth of Rattlesnake Creek near the city of Missoula in Missoula County.

POTENTIAL IMPACT ON PHYSICAL ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Terrestrial & aquatic life and habitats		X				X
2. Water quality, quantity & distribution			X			X
3. Geology & soil quality, stability & moisture			X			X
4. Vegetation cover, quantity & quality			X			X
5. Aesthetics			X			X
6. Air quality				X		
7. Unique, endangered, fragile, or limited environmental resources		X				X
8. Demands on environmental resources of land, water, air & energy				X		
9. Historical & archaeological sites				X		X

POTENTIAL IMPACTS ON THE HUMAN ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Social structures & mores				X		
2. Cultural uniqueness & diversity				X		
3. Local & state tax base & tax revenue				X		
4. Agricultural or industrial production				X		
5. Human health				X		
6. Quantity & distribution of community & personal income				X		
7. Access to & quality of recreational and wilderness activities			X			X
8. Quantity & distribution of employment				X		
9. Distribution & density of population & housing				X		
10. Demands for government services				X		
11. Industrial & commercial activity				X		
12. Demands for energy				X		
13. Locally adopted environmental plans & goals				X		
14. Transportation networks & traffic flows				X		

Other groups or agencies contacted or which may have overlapping jurisdiction Missoula County Conservation District, US Fish and Wildlife Service, US Army Corp of Engineers, Montana Department of Environmental Quality, State Historic Preservation Office

Individuals or groups contributing to this EA Bruce Farling, Montana Trout Unlimited; Ladd Knotek, Montana Fish, Wildlife and Parks

Recommendation concerning preparation of EIS No EIS required.

EA prepared by: Mark Lere
Date: March 6, 2002